

In the Abstract:

Please amend the abstract of the present application, as follows:

A system to perform digital image cross talk correction. The invention provides a solution that provides a radical reduction in the memory and processing system requirements of conventional digital image processing systems. A single line buffer may be used in place of an entire frame buffer in conventional systems. Single or multi pass implementations of the invention are operable, each implementation being further adaptable to perform cross talk correction using variable grid sizes including any number of desired pixels within the grid. The invention is operable with the only memory requirements being those of line buffers as compared from entire frame buffers employed within conventional cross talk correction image processing solutions. In performing multi pass cross talk correction, cross talk correction may be achieved on a single pass over the entire image. Certain of the preceding pixels, along a programmed or selected trajectory within the digital image, are cross talk corrected numerous times An image processing system comprises a processing circuitry operable to receive a digital image and a line buffer circuitry communicatively coupled to the processing circuitry, the line buffer circuitry comprising a plurality of line buffers. The processing circuitry performs cross talk correction on a first pixel during a first pass to generate a first cross talk corrected pixel, wherein said first pixel is received from a first line buffer of the plurality of line buffers. During the first pass, the processing circuitry further stores the first cross talk corrected pixel in the line buffer circuitry, retrieves the first cross talk corrected pixel

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from the line buffer circuitry, and uses the first cross talk corrected pixel to perform cross
talk correction on a second pixel to generate a second cross talk corrected pixel, wherein
the second pixel is received from a second line buffer of the plurality of line buffers.
